Information on Residential Solar Installation

This is a SAMPLE price chart for purchasing solar electric panels.
Rebates are for Tucson Electric Power – other utilities are somewhat different, but in the same range.
TEP provides a rebate of $3,000 per kilowatt (DC), up to 40% of the cost of the system.

Many factors affect the price of a system - THIS CHART IS MEANT AS A BASIS FOR COMPARISON ONLY.

System Size in DC Watts	*Equivalent System in AC Watts*	*KWh Produced Each Year*	*Total System Cost Before Rebate and Tax Credits*	*TEP Rebate* *$3,000/kW*	*State Tax Credit* *$1,000*	*Federal Tax Credit* *$3,000*	***Net Project Cost***	*Estimated Payback Period*
1520 W = 1.52 kW	1079 W = 1.079 kW	2562 kWh	$13,081	-$4,560	-$1,000	-$2,000	**$5,521**	15.0 years
2470	1754	4163	$18,423	-$7,410	-$1,000	-$2,000	**$8,013**	13.2 years
3040	2158	5124	$21,388	-$9,120	-$1,000	-$2,000	**$9,268**	12.7 years
4560	3238	7686	$30,254	-$13,680	-$1,000	-$2,000	**$13,574**	12.5 years
6080	4317	10248	$40,023	-$18,240	-$1,000	-$2,000	**$18,783**	12.8 years
6840	4856	11530	$44,514	-$20,520	-$1,000	-$2,000	**$20,994**	12.8 years
8550	6071	14412	$54,434	-$25,650	-$1,000	-$2,000	**$25,784**	12.6 years

- **Many variables can affect the price:**
  - each installation company has different rates and different brands
  - cost of permitting
  - available roof space, slope of the roof, and difficulty/time of the installation
  - as a rule, the bigger the system, the greater the volume discount

- **Inverters – changing DC watts produced into usable AC watts:**
  - solar panels produce DC (direct current). However, almost everything in your house runs on AC (alternating current), which is what the utility provides.
  - the power from your panels must flow through an **inverter** which changes it to AC, which can be used for your home or pushed onto the grid.
  - there is a loss of power by about 20 – 30% when it is converted from DC to AC.
  - the utility incentive is for the system size in DC watts.

- **Conversion chart:**

1000 watts (W) = 1 kilowatt (kW)	***example: a house might use a 2 – 5 kilowatt system***
1000 kilowatt (kW) = 1 megawatt (MW)	***example: a big box store might use a 200 kilowatt system***
1000 megawatts (MW) = 1 gigawatt (GW)	***example: a coal power plant or a thermal solar plant might produce 200-500 megawatts of power***

- **A kilowatt hour (kWh) is the amount of electricity it takes to run a 100 watt light bulb for 10 hours.**
- **The average household uses around 11,000 kilowatt hours (kWh) per year.**